

What is claimed is:

1. An endodontic file comprising:
a round shank having a first diameter;
5 a tip at the end of the file remote from the shank,
said tip having a second diameter which is smaller than said
first diameter; and
a tapered flute portion extending between said tip
and said shank and having at least one spiral cutting edge
10 throughout the length thereof;
wherein said tapered flute portion has at least two
different degrees of taper in different parts of said flute
portion.
- 15 2. The file of claim 1 further including a handle
affixed to the shank of the file for facilitating the
manipulation of the file.
- 20 3. The file of claim 1 wherein the shank is
provided with a latch-grip portion for coupling to a dental
handpiece.
- 25 4. The file of claim 1 wherein a first part of said
flute portion, adjacent the tip, is provided with a first fixed
degree of taper throughout the extent of first said part and a
second part of said flute portion, adjacent the shank, is
provided with a second fixed degree of taper which is less than
the taper of the first part.
- 30 5. The file of claim 4 wherein the taper of the
first part of the flute portion is larger than the taper of the
second part thereof.
- 35 6. The file of claim 5 wherein the taper of the
second part of the flute portion is 0.02 mm/mm.
7. The file of claim 5 wherein the taper of the
second part of the flute portion is 0.04 mm/mm.

8. The file of claim 4 wherein the taper of the first part of the flute portion is 0.12 mm/mm.
9. The file of claim 4 wherein the taper of the first part of the flute portion is 0.10 mm/mm.
10. The file of claim 4 wherein the taper of the first part of the flute portion is 0.08 mm/mm.
11. The file of claim 4 wherein the taper of the first part of the flute portion is 0.06 mm/mm.
12. The file of claim 4 wherein the taper of the first part of the flute portion is 0.04 mm/mm.
13. The file of claim 4 wherein the taper of the first part of the flute portion is 0.02 mm/mm.
14. The file of claim 4 wherein the tapers of the first and second parts of the flute portion are in a selected ratio with respect to each other.
15. The file of claim 14 wherein said ratio is within a range of three to six.
16. The file of claim 12 wherein the degree of taper changes abruptly between the first and second parts of the flute portion.
17. The file of claim 16 wherein the point of demarcation between said first and second parts of the flute portion is at a preselected distance from the file tip.
18. A set of endodontic files, each corresponding to the file of claim 4, wherein the taper of the first part of the flute portion varies from file to file in said set.
19. The set of endodontic files according to claim

18 wherein the range of variation of taper of the first part of the flute portion is from 0.02 mm/mm to 0.12 mm/mm.

5 20. The set of endodontic files according to claim 18 wherein the range of variation of taper of the first part of the flute portion is from 0.06 mm/mm to 0.12 mm/mm.

10 21. The endodontic file set of claim 20 wherein the taper of the second part of the flute portion is of a selected value of 0.02 mm/mm.

15 22. The endodontic file set of claim 20 wherein the taper of the second part of the flute portion is of a selected value of 0.04 mm/mm.

20 23. The set of endodontic files according to claim 20 wherein the degree of taper of the second part of the flute portion varies from file to file inversely to the variation of degree of taper in the first part of the flute portions of said set.

25 24. The set of endodontic files in accordance with claim 20 wherein the taper of the second part of said flute portion increases from 0.01 to 0.04 mm/mm as the taper of the first part of said flute portion diminishes from 0.12 to 0.06 mm/mm.